Notebook, N-01-04-16

This undated notebook is a continuation of N-01-04-15. It contains notes by Edison and an unidentified experimenter regarding trials of various alloys for use in thermocouples. The metals tested include bismuth, cadmium, lead, and tin. At the beginning of the first entry Edison wrote,"Thermo 2nd Book." The spine is stamped "153." The pages are unnumbered. Approximately 20 pages have been used.

Thermo Eph.

Thermo 2nd Book

Alloy
Pb 90
Bi 10

5	95	1.4
10	90	.9
15	85	.8
20	80	.8
25	75	.8
30	70	.5
35	65	.5
40	60	.6
45	55	.7
50	50	.6
55	45	.5
60	40	.4
65	35	.3
70	30	.2
75	25	.1
80	20	.1
85	15	0
90	10	0
95	5	.3

Pt 85
Rt 15

5	95	1.6
10	90	1.2
15	85	1
20	80	.5
25	75	.5
30	70	.5
35	65	.6
40	60	.5
45	55	.7
50	50	.5
55	45	.5
60	40	.5
65	35	.4
70	30	.3
75	25	.2
80	20	.2
85	15	.1
90	10	0
95	5	.1 opposite

Alloy
Cd 10
Bi 20

5	Sb 95	3.7
10	90	3.8
15	85	4.
20	80	4.8
25	75	4.3
30	70	6.9
35	65	5.
40	60	5.7
45	55	6.8
50	50	8.5
55	45	8.4
60	40	8.9
65	35	9.3
70	30	2.8
75	25	.7
80	20	.5
85	15	.3
90	10	.2
95	5	.1

Cd 65 Bi 35		
5	95	3.6
10	90	3.8
15	85	4.
20	80	4.1
25	75	4.9
30	70	5.1
35	65	5.6
40	60	5.9
45	55	6.2
50	50	7.
55	45	7.1
60	40	5.
65	35	3.5
70	30	1.2
75	25	1.1
80	20	.5
85	15	.2
90	10	.1
95	5	0

alloy

Cd 5	Sb 95	2.8
Bi 95	90	2.5
	85	2.5
	80	2.7
	75	2.3
	70	2.1
	65	2.1
	60	1.5
	55	1.
	50	.5
	45	.2 apprx it
	40	.8 "
	35	1.2 "
	30	2.5 "
	25	3.5 "
	20	4. "
	15	5 "
	10	5.7 "
	5	6.1 "

Alley
Ed. 16
Bi 90

5 St	95	3
10	90	2.9
15	85	3.
20	80	2.9
25	75	2.5
30	70	2.7
35	65	2.4
40	60	2.
45	55	1.8
50	50	1.8
55	45	1.5
60	40	1. opposite
65	35	1.2 "
70	30	2. "
75	25	3.5 "
80	20	4.3 "
85	13	4.6 "
90	10	5.6 "
95	5	4.9 "

Alloy

Cd 15 Bi 85	Sb	Sn	
	5	95	3
	10	90	3
	15	85	3
	20	80	2.9
	25	75	2.9
	30	70	2.8
	33	65	2.8
	40	60	2.4
	45	55	1.8
	50	50	1.
	53	45	.6
	60	40	1.
	65	35	1.6 opposite
	70	30	1.9 "
	75	25	2.8 "
	80	20	3.9 "
	85	15	4 "
	90	10	4.9 "
	93	5	3.9 "

Alloy

Cd 20
Bi 80

5	Sb 95	3
10	90	3
15	85	3.2
20	80	3.1
25	75	3.1
30	70	3.
35	65	3.2
40	60	2.5
45	55	3.
50	50	1.9
55	45	2.
60	40	.9
65	35	.1
70	30	1 opposite
75	25	3 "
80	20	1 "
85	15	3.5 "
90	10	2.4 "
95	5	2.9 "

alba			
Col 25	5	95	3.3
Bi 75	10	90	3.1
	15	85	3.2
	20	80	3.4
	25	75	3.2
	30	70	3.
	35	65	3.5
	40	60	3.1
	45	55	3.
	50	50	2.9
	55	45	2.8
	60	40	1.5
	65	35	2.1
	70	30	1.6
	75	25	1.5
	80	20	.5 Opposite
	85	15	.5 "
	90	10	.6 "
	95	5	1 Opposite

Sb 80 Ni 20	Sn	95	
10	90		
15	85		
20	80		
25	75		
30	70		
35	65		
40	60		.1
45	55		
50	50		.1
55	45		
60	40		0
65	35		
70	30		0
75	25		
80	20		.1 opposite
85	15		
90	10		.1 "
95	5		

Alloy			
Sb 90	5	Sn 95	
Ni 10	10	90	.5
	15	85	
	20	80	.3
	25	75	
	30	70	.3
	35	65	
	40	60	.2
	45	55	
	50	50	.1
	55	45	
	60	40	0
	65	35	
	70	30	0
	75	25	
	80	20	.1 opposite
	85	15	
	90	10	.1 opposite
	95	5	

Alloy		Grinc	
Sn 90	80	20	0
Ni 10	70	30	.1 opposite
	60	40	.1 "
			0
Pb 90		Grinc	
Ni 10	80	20	0
	70	30	0
	60	40	.1 opposite
	50	50	.1 "
	40	60	.2 "
Sb 80		Grinc	
Ni 20	90	10	0
	80	20	.1
	70	30	0
	60	40	0
	50	50	1.5
		Cadmium	
Sb 80	90	10	.1
Ni 20	80	20	.1
	70	30	.1

Sb 90 Ni 10	Sb		
	50	50	1.9
	25	75	1.5
Sb 80 Ni 20	Pb		
	90	10	.1 opposite
	80	20	.1 "
	70	30	.1 "
Pb 90 Ni 10	Bi		
	90	1	0
	80	20	1
	70	30	.9
	60	40	1.1
	50	50	.1 opposite
Sn 80 Ni 20	Zinc		
	90	10	0
	80	20	.1 opposite
	75	25	.1 "
Sn 80 Ni 20	Sb		5
	90	10	
	80	20	.4
	70	30	.9
	60	40	1
	50	50	.1

Sn 90
Ti 10

Sb

90	10	1.1
80	20	.8
70	30	.5
60	40	.4
50	50	.3
40	60	.1
30	70	0
20	80	0
10	90	.1 opposite

Sb 90 Sn
Fe 10

90	10	0
80	20	.1 opposite
70	30	.1
60	40	0
50	50	.4 .2

Sb 80 Sn
Fe 20

90	10	1 opposite
80	20	0
75	25	.5
70	30	.5

Sb

Quic 90 Cobalt 10		
95	5	2.9
90	10	3.1
85	15	2.4
80	20	4.9
75	25	4.2

Sb 80 Ni 20	Bi		
	90	10	2.5
	80	20	6.8 opposite
	70	30	3 "
	60	40	4 "
	50	50	3.5 "

Pb 80 Ag 20	Bi		
	90	10	.1
	80	20	1
	75	25	1
	70	30	1.5

Sn 90 Ni 10	Sn 90 Ni 10	Zinc	
	90	10	0
	80	20	.1 opposite

Sn 90
Fe 10 — Bi

10	90	8.9
20	80	1.8
30	70	.8
40	60	.2
50	50	.2

Sn 80
Fe 20 — Juic

10	90	0
10	80	.1 opposite
30	70	.1 "
40	60	0
50	50	.1 "

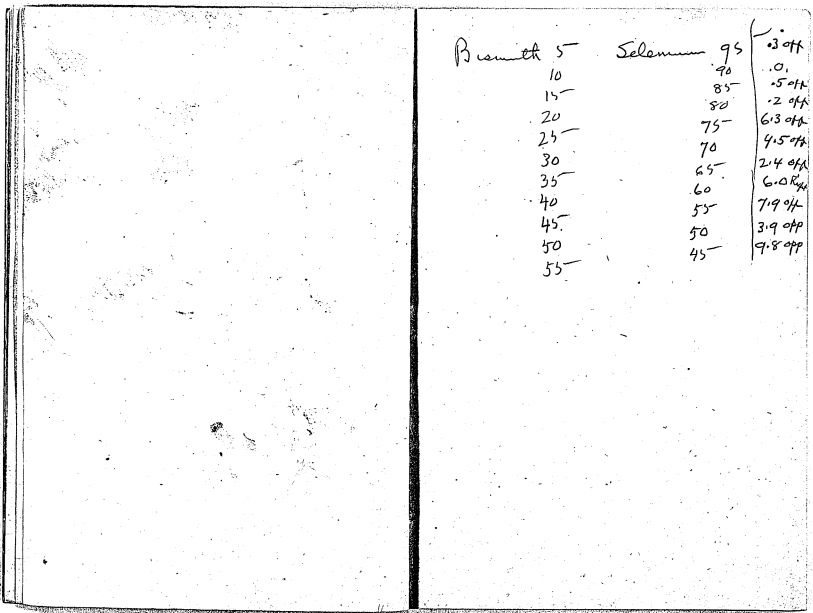
Sn 70
Fe 30 — Juic

10	90	0
20	80	0
25	75	.1 opposite
30	70	.1 "

Sn 60 / Fe 40	Zinc	
10	90	· / Opposite
20	80	1 "
25	75	0

Selenium 5 Sb 95 — 3.9
" 10 " 90 — 4
Selenium 15 " 85 — 3.8
20 " 80 — 3.5
25 " 75 — 4
55 " 45 — 1
60 " 40 — 0
70 " 30 — 0
65 " 35 — 0
75 " 25 — 0
80 " 20 — 0
85 " 15 — 0
90 " 10 — 0
95 " 5 — 0

Selenium 5	Arabinose 95	
10	90	
15	85	
20	80	
25	75	
30	70	3.1
35	65	3.1
40	60	2.7
45	55	.4 opp
50	50	0
55	45	
60	40	
65	35	
70	30	
75	25	
80	20	
85	15	
90	10	
95	5	


Bismuth 5
10
15
20
25
30
35
40
45
50
55
Selenium 95
90
85
80
75
70
65
60
55
50
45
.3 off
.01
.5 off
.2 off
6.3 off
4.5 off
2.4 off
6.0 Rpt
7.9 off
3.9 off
9.8 off

Alley Cad 99	Jellum 1	55	Sb 45	.2 opp
Cd 98	Jel 2	55	" 45	2.3 Right
97	3	"	"	1.8 "
96	4	"	"	.2 opp
95	4	"	"	0
94	6	"	"	.2 opp
93	7			2.4 Right
92	8	"	"	2.8 "
91	9			4.0 "
90	10	"	"	.1 "
89	11	"	"	1.5 opp
88	12	"	"	1.5 Right
87	13	"	"	4.3 "
86	14	"	"	.1 "
85	15			.2 opp
84	16			2.5 Right

Alloy Cadmium	Tellurium		Center	
84	16	55	45	2.5 - Right
83	17	"	"	2.0 opp —
82	18	"	"	0
81	19	"	"	1.8 opp
80	20	"	"	0

alloy Cd	Bi	55 Sb 45	1.2 Right
99	1		
98	2	"	.8 "
97	3	"	1.2 "
96	4	"	.4 "
95	5	"	1.0 "
94	6	"	2. "
93	7		.6 "
92	8		1.0 "
91	9		1.0 "
90	10		1.0 "
89	11		3.5 "
88	12		3.4 "
87	13		3.8 "
86	14		3.0 "
85	15		4.2 "
84	16		3.4 "

Cd	Bi				
83	17	} 55⁻	antiq	45⁻	4.0 Rydb
82	18	"	"	"	611 "
81	19	"	"	"	518 "
80	20	"	"	"	319 "